UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/794,637	02/03/1997	JOHN S. HENDRICKS	5033	6885

56015 7590 02/27/2006

PATTERSON & SHERIDAN, LLP/
SEDNA PATENT SERVICES, LLC
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702

EXAMINER	
LONSBERRY, HUNTER B	
ART UNIT	**PAPER NUMBER**
2611	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/794,637	HENDRICKS ET AL.	
	Examiner	Art Unit	
	Hunter B. Lonsberry	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-25,28-52 and 61-159* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *25,28-30,32-35,49-52,129-134 and 159* is/are allowed.

6)☒ Claim(s) *8-12, 18-20, 31,33-48, 61-84, 86-107, 109-128 and 125-158* is/are rejected.

7)☒ Claim(s) *13-17,21-24,85 and 108* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 13-17, 21-25, 85, and 108, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose nor reasonably suggest a method of transmitting programs to a plurality of transponders, prioritizing programs and assigning a number of different priority levels, allocating a portion of the bandwidth to signals by highest priority level to lowest, and continuing until all of the signals are allocated or all of the bandwidth is allocated, and then transmitting the plurality of signals to a plurality of transponders so that none of the transponders receives more than one of the signals as claimed in Claims 25 and 159.

Claims 25, 28-30, 32-35, 49-52, 129-134, and 159 are allowed.

Response to Arguments

2. Applicant's arguments filed 12/7/05 have been fully considered but they are not persuasive.

Applicant argues That Williams fails to teach diving said bandwidth so that each program category receives a segment of said bandwidth and that a dequeuer removing messages from the highest priority queue until the queue is empty is not the same as dividing bandwidth so that each program category receives a segment of said bandwidth (pages 28-29).

Regarding applicant's argument, Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first. As Williams discloses that each message has a corresponding category with an entitlement level(column 11, lines 39-49), that subscriber with the proper entitlement may receive all broadcast messages (column 12, lines 24-33), and regardless of the incoming data traffic volume, the dequeuing function will be able to clear messages until they reach normal levels (column 13, lines 1-37), every message, with its corresponding category is broadcasted (allocated bandwidth).

Applicant's failure to properly traverse the Official Notice taken as admission of prior art. In particular applicant must specifically point out the supposed errors in the Examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well known in the art. See 37 CFR 1.111(b). Applicant simply

makes a broad statement without referring to specific claims or the specific features of which Official Notice was taken.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 8-12, 18-20, 31, 36-48, and 122-128 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,253,275 to Yurt in view of U.S. Patent 5,115,309 to Hang and U.S. Patent 4,868,866 to Williams.

Regarding claim 8, Yurt discloses a method of allocating bandwidth to a plurality of programs, wherein each of said programs corresponds to one of a plurality of programs, the method comprising:

Selecting programs received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and allocating bandwidth (column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category).

Yurt fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, allocating a portion of the bandwidth to high priority level programs in each category and continuing the allocation steps with progressively lower priority levels until all the programs are allocated or all of the bandwidth is allocated.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated (figure 1, column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3) thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt to select or allocate bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated as taught by Hang, thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

The combination of Yurt and Hang fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, and allocating a portion of the bandwidth to high priority level programs.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first.

Regarding claim 9, Hang is relied upon to teach that the step of allocating includes dynamically changing the bandwidth allocation over time (column 5, lines 50-67).

Regarding claims 10-11, 122, 124, and 127, the combination of Yurt, Hang and Williams discloses allocating programs for transmission.

The combination of Yurt, Hang and Williams fails to disclose selecting programs based on programs watched information, marketing information, or consumer demand when determining a programs priority.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on programs watched and other

marketing and statistical information for the advantage of providing popular programs to subscribers (consumer demand). For example, the Nielsen rating system is the most widely known television marketing survey technique that performs periodic review of television viewership. Broadcasters utilize Nielsen type ratings systems to determine which programs to broadcast to subscribers and to determine advertising rates.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt, Hang and Williams to include selecting programs based on programs watched information and marketing information in order to provide the most popular programs to users and charge the accompanying high advertisement rate.

Regarding claims 12 and 20, Williams is relied upon to teach the use of an entitlement level (priority level) which indicates content available for one service versus content available for another service (column 11, lines 39-49, column 12, lines 24-35).

Regarding claim 18, Yurt discloses a method of allocating bandwidth to a plurality of programs, wherein each of said programs corresponds to one of a plurality of programs, the method comprising:

Selecting programs received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and allocating bandwidth (column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo"

corresponds to the mystery category and the movie "The French connection" corresponds to the drama category).

Yurt fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, allocating a portion of the bandwidth to high priority level programs in each category and continuing the allocation steps with progressively lower priority levels until all the programs are allocated or all of the bandwidth is allocated, and attaching a header which indicates a priority level.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated (figure 1, column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3) thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt to select or allocate bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated as taught by Hang, thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

The combination of Yurt and Hang fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, allocating a portion of the

bandwidth to high priority level programs, and attaching a header which indicates a priority level.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first, additionally an entitlement level is transmitted in the message header and enables a recipient to recognize messages (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claim 19, Williams is relied upon to teach the use of a digital header and digital signals which are compressed and combined with a program information signal (column 16, lines 6-26, the program information signal is included in the body of the message).

Regarding claim 31, Yurt discloses a method of allocating bandwidth to a plurality of programs which are transmitted to a plurality of headends 100 (figure 1c, 1e, column 4, lines 3-15), wherein each of said programs corresponds to one of a plurality of programs, the method comprising:

Selecting programs received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and allocating bandwidth (column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category).

Yurt fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, allocating a portion of the bandwidth to high priority level programs in each category and continuing the allocation steps with progressively lower priority levels until all the programs are allocated or all of the bandwidth is allocated, a second set of bandwidth corresponding to a second headend.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated (figure 1, column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3) thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt to select or allocate bandwidth to programs based on each

programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated as taught by Hang, thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

The combination of Yurt and Hang fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, and allocating a portion of the bandwidth to high priority level programs.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first, additionally an entitlement level is transmitted in the message header and enables a recipient to recognize messages (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claims 38-52 Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the selected programs over time (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Regarding claims 36-37, Yurt discloses a method of allocating bandwidth to a plurality of programs, wherein each of said programs corresponds to one of a plurality of programs, the method comprising:

Selecting programs received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and allocating bandwidth (column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category).

Yurt fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, allocating a portion of the bandwidth to high priority level programs in each category and continuing the allocation steps with progressively lower priority levels until all the programs are allocated or all of the bandwidth is allocated, and the step of dynamically changing the bandwidth allocation includes varying a compression ratio of one of the selected programs and the amount of changes within a selected program over time.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the

programs are allocated or all of the bandwidth is allocated, a compression ratio may be varied for a program, and bandwidth changes for a program over time (figure 1, column 3, line 10-column 4, line 65, column 5, line 50-column 6, line 3, column 7, lines 14-62, column 9, line 62-column 10, line 3) thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt to select or allocate bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated as taught by Hang, thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers.

The combination of Yurt and Hang fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, and allocating a portion of the bandwidth to high priority level programs.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first.

Regarding claims 38-48 Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the selected programs over time (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Regarding claims 123 and 126, Hang is relied upon to teach changing bandwidth allocation on demand (column 7, line 63-column 8, line 61).

Regarding claim 125 and 128, Williams discloses a real-time broadcast data distribution method, which assigns priorities to different categories of data thus changing the bandwidth allocation (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37).

5. Claims 61-78 and 138-143 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,115,309 to Hang in view of U.S. Patent 4,949,187 to Cohen and U.S. Patent 4,868,866 to Williams.

Regarding claim 61, Hang discloses computer assisted packaging system (figure 1) for generating program control information, packaging programs and for allocating bandwidth to a plurality of programs comprising:

A multiplexer 104 for receiving at least one program signal and at least one program control signal and for allocating a portion of segments of bandwidth to selected programs (column 5, lines 5-27);

A delivery control processor unit 103 connected to said multiplexer 104, whereby said program signals and said program control signals are multiplexed by said multiplexer and controlled by processor 103 (column 5, lines 5-27).

Hang fails to disclose a CPU connected to the delivery control processor unit, the CPU relays commands to the delivery control processor unit, and dividing bandwidth so that each program category receives a segment of bandwidth.

Cohen discloses in figure 4, a central processing unit 36 connected a delivery control processor unit 52, which receives commands from the CPU 36 (column 4, lines 19-45), thus enabling a single processor to coordinate amongst a number of different systems (column 2, line 65-column 3, line 3).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Hang, to utilize a CPU as taught by Cohen, thus enabling a single processor to coordinate amongst a number of different systems.

The combination of Hang and Cohen fails to disclose dividing bandwidth so that each program category receives a segment of bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37, As Williams discloses that each message has a corresponding category with an entitlement level (column 11, lines 39-49), that subscriber with the proper entitlement may receive all broadcast messages (column 12, lines 24-33), and regardless of the incoming data traffic volume, the dequeuing function will be able to clear messages until they reach normal levels (column 13, lines 1-37), every message, with its corresponding category is broadcasted (allocated bandwidth), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Hang and Cohen to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claim 62, Cohen is relied upon to teach the use of a workstation, which interfaces with a database and allows a packager or programmer to interface with the system (column 3, line 9-33).

Regarding claim 63, Hang discloses in figure 1, that AV equipment is connected via video in 105 which connected to video coders 102-n which are in turn connected to a delivery control processor 103 that dynamically changes the bandwidth allocation over time (column 5, lines 5-27, column 7, lines 14-62).

Cohen is relied upon to teach the use of a CPU 52 which is connected to AV equipment (discs, column 4, lines 1-18).

Regarding claims 64-67, Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the selected programs over time, compression ratios may change (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Hang inherently teaches that programs with a higher compression ratio require lower bitrates and bandwidth, while programs with a lower compression ratio require high bitrates and more bandwidth as the compression ratio of a datastream dictates how much data is generated.

Regarding claims 68-69, Cohen is relied upon to teach the use of a database 40, which is connected to a CPU 36 and is an operations center database (column 4, lines 19-29).

Regarding claim 70, the combination of Hang and Cohen discloses a program packaging system.

The combination of Hang and Cohen do not disclose the use of a cable franchise information database.

The examiner takes official notice that the use of a cable franchise information database is notoriously well known in the art. A cable franchise information database enables a program provider to recognize which franchises provide programming directly to the users and enables billing.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Hang and Cohen to utilize a cable franchise information database, in order to bill each franchise for the programming received.

Regarding claim 71, Cohen is relied upon to teach the use of a local video storage database (column 4, lines 1-18).

Regarding claim 72, Hang discloses computer assisted packaging system (figure 1) allocating bandwidth to a plurality of programs (each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category) comprising:

a multiplexer 104 for receiving at least one program signal and at least one program control signal and for allocating a portion of segments of bandwidth to selected programs (column 5, lines 5-27), and allocates segments of bandwidth until either all the

programs are allocated bandwidth or all the bandwidth is allocated (column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3);

a delivery control processor unit 103 connected to said multiplexer 104, whereby said program signals and said program control signals are multiplexed by said multiplexer (column 5, lines 5-27).

Hang fails to disclose a CPU connected to the delivery control processor unit, the CPU relaying commands to the delivery control processor unit, and dividing bandwidth so that each program category receives a segment of bandwidth.

Cohen discloses in figure 4, a central processing unit 36 connected a delivery control processor unit 52, which receives commands from the CPU 36 (column 4, lines 19-45), thus enabling a single processor to coordinate amongst a number of different systems (column 2, line 65-column 3, line 3).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Hang, to utilize a CPU as taught by Cohen, thus enabling a single processor to coordinate amongst a number of different systems.

The combination of Hang and Cohen fails to disclose dividing bandwidth so that each program category receives a segment of bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37, As Williams discloses that each message has a corresponding category with an entitlement

level(column 11, lines 39-49), that subscriber with the proper entitlement may receive all broadcast messages (column 12, lines 24-33), and regardless of the incoming data traffic volume, the dequeuing function will be able to clear messages until they reach normal levels (column 13, lines 1-37), every message, with its corresponding category is broadcasted (allocated bandwidth), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Hang and Cohen to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claims 73-77, Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the selected programs over time, compression ratios may change (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Hang inherently teaches that programs with a higher compression ratio require lower bitrates and bandwidth, while programs with a lower compression ratio require high bitrates and more bandwidth as the compression ratio of a datastream dictates how much data is generated.

Regarding claim 78, Cohen is relied upon to teach a CPU which receives instructions from a user, which then determines which data to select (column 4, lines 19-29).

Regarding claims 138, 141, Hang is relied upon to teach changing bandwidth allocation on demand (column 7, line 63-column 8, line 61).

Regarding claims 139 and 142, Hang and Cohen teach dynamically changing bandwidth allocation.

The combination of Hang and Cohen fails to disclose changing the bandwidth allocation based on consumer demand.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on programs watched and other marketing and statistical information for the advantage of providing popular programs to subscribers (consumer demand). For example, the Nielsen rating system is the most widely known television marketing survey technique that performs periodic review of television viewership. Broadcasters utilize Nielsen type ratings systems to determine which programs to broadcast to subscribers and to determine advertising rates.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Hang and Cohen to include selecting programs based on programs watched information and marketing information in order to provide

the most popular programs to users and charge the accompanying high advertisement rate.

Regarding claims 140 and 143, Cohen teaches AV equipment connected to a CPU.

Hang is relied upon to teach dynamically changing the bandwidth allocation in real time (column 7, lines 13-62). In particular, Hang discloses that a coding factor based on a prior number of frames and their estimated channel sharing factor may be updated based on the conditions of the current scene.

6. Claims 79-84, 86-94, and 144-149 and are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,115,309 to Hang in view of U.S. Patent 4,949,187 to Cohen and U.S. Patent 4,868,866 to Williams.

Regarding claim 79, Hang discloses computer assisted packaging system (figure 1) allocating bandwidth to a plurality of programs (each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category) comprising:

a multiplexer 104 for receiving at least one program signal and at least one program control signal and for allocating a portion of segments of bandwidth to selected programs (column 5, lines 5-27), and allocates segments of bandwidth until either all the

programs are allocated bandwidth or all the bandwidth is allocated (column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3);

a delivery control processor unit 103 connected to said multiplexer 104, whereby said program signals and said program control signals are multiplexed by said multiplexer (column 5, lines 5-27).

Hang fails to disclose a CPU connected to the delivery control processor unit, and dividing the bandwidth so that each of the program categories receives a segment of the bandwidth.

Cohen discloses in figure 4, a central processing unit 36 connected a delivery control processor unit 52 which receives commands from the CPU 36 (column 4, lines 19-45), thus enabling a single processor to coordinate amongst a number of different systems (column 2, line 65-column 3, line 3).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Hang, to utilize a CPU as taught by Cohen, thus enabling a single processor to coordinate amongst a number of different systems.

The combination of Hang and Cohen fails to disclose dividing the bandwidth so that each of the program categories receives a segment of the bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus

delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Hang and Cohen to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first.

Regarding claims 80-84, Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the selected programs over time, compression ratios may change (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Hang inherently teaches that programs with a higher compression ratio require lower bitrates and bandwidth, while programs with a lower compression ratio require high bitrates and more bandwidth as the compression ratio of a datastream dictates how much data is generated.

Regarding claim 86, Cohen is relied upon to teach a CPU which receives instructions from a user, which then determines which data to select (column 4, lines 19-29).

Regarding claim 87, the combination of Hang and Cohen discloses a bandwidth allocation system.

The combination of Hang and Cohen does not disclose assigning programs a priority level including a high priority level and lower priority levels.

The combination of Yurt and Hang fails to disclose dividing the bandwidth so that each program category receives a segment of the bandwidth, allocating a portion of the bandwidth to high priority level programs, and attaching a header which indicates a priority level.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first, additionally an entitlement level is transmitted in the message header and enables a recipient to recognize messages (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Hang and Cohen to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claim 88, Hang teaches the use of AV equipment (coders 102-n) which dynamically changes the bandwidth allocation over time (column 5, lines 5-37).

Cohen is relied upon to teach the use of a CPU attached to AV equipment (column 4, lines 1-29).

Regarding claims 89-92, Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the selected programs over time, compression ratios may change (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Hang inherently teaches that programs with a higher compression ratio require lower bitrates and bandwidth, while programs with a lower compression ratio require high bitrates and more bandwidth as the compression ratio of a datastream dictates how much data is generated.

Regarding claim 93, Williams is relied upon to teach an algorithm for assigning priority levels (column 4, lines 1-10).

Regarding claim 94, Williams is relied upon to teach the use of a header which includes an entitlement message that indicates priority (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37).

Regarding claims 144, 147, Hang is relied upon to teach changing bandwidth allocation on demand (column 7, line 63-column 8, line 61).

Regarding claim 145, 148, Hang and Cohen teach dynamically changing bandwidth allocation.

The combination of Hang, Williams and Cohen fails to disclose changing the bandwidth allocation based on consumer demand.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on programs watched and other marketing and statistical information for the advantage of providing popular programs to subscribers (consumer demand). For example, the Nielsen rating system is the most widely known television marketing survey technique that performs periodic review of television viewership. Broadcasters utilize Nielsen type ratings systems to determine which programs to broadcast to subscribers and to determine advertising rates.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams, Hang and Cohen to include selecting programs based on programs watched information and marketing information in order to provide the most popular programs to users and charge the accompanying high advertisement rate.

Regarding claim, 146, 149, Cohen teaches AV equipment connected to a CPU.

Hang is relied upon to teach dynamically changing the bandwidth allocation in real time (column 7, lines 13-62). In particular, Hang discloses that a coding factor based on a prior number of frames and their estimated channel sharing factor may be updated based on the conditions of the current scene.

7. Claims 95-101 and 150-152 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,253,275 to Yurt in view of U.S. Patent 5,115,309 to Hang, U.S. Patent 4,949,187 to Cohen, and U.S. Patent 4,868,866 to Williams.

Regarding claim 95, Yurt discloses a system (figure 1c) for allocating bandwidth to a plurality of programs, said programs corresponding to a plurality of categories ((column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category) comprising

An operations center 300 comprising a computer assisted packing system (column 4, lines 3-15)

programs are received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and bandwidth is allocated (column 17, line 59-column 18, line 3).

Yurt fails to disclose a CPU, delivery control processor unit connected to the CPU and a MUX connected to the delivery control processor, dividing bandwidth so that each program categories receives a segment of bandwidth.

Hang discloses in figure 1, a multiplexer 104 for receiving at least one program signal and at least one program control signal and for allocating a portion of segments of bandwidth to selected programs (column 5, lines 5-27), and allocates segments of bandwidth until either all the programs are allocated bandwidth or all the bandwidth is allocated (column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3);

a delivery control processor unit 103 connected to said multiplexer 104, whereby said program signals and said program control signals are multiplexed by said multiplexer (column 5, lines 5-27).

The combination of Yurt and Hang fails to disclose a CPU connected to the delivery control processor unit and dividing bandwidth so that each program category receives a segment of bandwidth.

Cohen discloses in figure 4, a central processing unit 36 connected a delivery control processor unit 52 which receives commands from the CPU 36 (column 4, lines 19-45), thus enabling a single processor to coordinate amongst a number of different systems (column 2, line 65-column 3, line 3).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt and Hang, to utilize a CPU as taught by Cohen, thus enabling a single processor to coordinate amongst a number of different systems.

The combination of Yurt, Hang and Cohen fails to disclose dividing bandwidth so that each program category receives a segment of bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a

priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37, As Williams discloses that each message has a corresponding category with an entitlement level(column 11, lines 39-49), that subscriber with the proper entitlement may receive all broadcast messages (column 12, lines 24-33), and regardless of the incoming data traffic volume, the dequeuing function will be able to clear messages until they reach normal levels (column 13, lines 1-37), every message, with its corresponding category is broadcasted (allocated bandwidth), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt, Hang and Cohen to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claim 96, Hang teaches the use of AV equipment (coders 102-n) which dynamically changes the bandwidth allocation over time (column 5, lines 5-37).

Cohen is relied upon to teach the use of a CPU attached to AV equipment (column 4, lines 1-29).

Regarding claims 97-100, Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the selected

programs over time, compression ratios may change (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Hang inherently teaches that programs with a higher compression ratio require lower bitrates and bandwidth, while programs with a lower compression ratio require high bitrates and more bandwidth as the compression ratio of a datastream dictates how much data is generated.

Regarding claim 101, Yurt is relied upon to teach utilizing an algorithm to select said programs (column 17, line 59-column 18, line 3).

Regarding claims 150, Hang is relied upon to teach changing bandwidth allocation on demand (column 7, line 63-column 8, line 61).

Regarding claim 151, Yurt, Hang and Cohen teach dynamically changing bandwidth allocation.

The combination of Hang and Cohen fails to disclose changing the bandwidth allocation based on consumer demand.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on programs watched and other marketing and statistical information for the advantage of providing popular programs to subscribers (consumer demand). For example, the Nielsen rating system is the most

widely known television marketing survey technique that performs periodic review of television viewership. Broadcasters utilize Nielsen type ratings systems to determine which programs to broadcast to subscribers and to determine advertising rates.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Hang and Cohen to include selecting programs based on programs watched information and marketing information in order to provide the most popular programs to users and charge the accompanying high advertisement rate.

Regarding claim 152, Cohen teaches AV equipment connected to a CPU.

Hang is relied upon to teach dynamically changing the bandwidth allocation in real time (column 7, lines 13-62). In particular, Hang discloses that a coding factor based on a prior number of frames and their estimated channel sharing factor may be updated based on the conditions of the current scene.

8. Claims 102-107, 109-121, and 153-158 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,253,275 to Yurt in view of U.S. Patent 5,115,309 to Hang and U.S. Patent 4,949,187 to Cohen in further view of U.S. Patent 4,868,866 to Williams.

Regarding claim 102, the combination of Yurt, Hang and Cohen fails to disclose diving the bandwidth so that each of the program categories receives a segment of bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt, Hang and Cohen to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first.

Regarding claims 103, 111, Hang teaches the use of AV equipment (coders 102-n) which dynamically changes the bandwidth allocation over time (column 5, lines 5-37).

Cohen is relied upon to teach the use of a CPU attached to AV equipment (column 4, lines 1-29).

Regarding claims 104-107, 112-115, Hang is relied upon to teach changing the bandwidth allocation based upon the amount of changes within at least one of the

selected programs over time, compression ratios may change (column 5, line 50-column 6, line 3, column 7, lines 14-62), the changes may occur frame to frame and may include changes in visual detail.

Hang inherently teaches that programs with a higher compression ratio require lower bitrates and bandwidth, while programs with a lower compression ratio require high bitrates and more bandwidth as the compression ratio of a datastream dictates how much data is generated.

Regarding claims 109, 116, Yurt is relied upon to teach utilizing an algorithm to select said programs (column 17, line 59-column 18, line 3).

Regarding claim 110, Yurt discloses a system (figure 1c) for allocating bandwidth to a plurality of programs, said programs corresponding to a plurality of categories ((column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category) comprising

An operations center 300 comprising a computer assisted packing system (column 4, lines 3-15)

programs are received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and bandwidth is allocated (column 17, line 59-column 18, line 3).

Yurt fails to disclose a CPU, delivery control processor unit connected to the CPU, a MUX connected to the delivery control processor, assigning priority levels to programming including a high priority level and successively lower levels and dividing the bandwidth so that each program category receives a segment of the bandwidth.

Hang discloses in figure 1, a multiplexer 104 for receiving at least one program signal and at least one program control signal and for allocating a portion of segments of bandwidth to selected programs (column 5, lines 5-27), and allocates segments of bandwidth until either all the programs are allocated bandwidth or all the bandwidth is allocated (column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3);

a delivery control processor unit 103 connected to said multiplexer 104, whereby said program signals and said program control signals are multiplexed by said multiplexer (column 5, lines 5-27).

The combination of Yurt and Hang fails to disclose a CPU connected to the delivery control processor unit and assigning priority levels to programming including a high priority level and successively lower levels and dividing the bandwidth so that each program category receives a segment of the bandwidth..

Cohen discloses in figure 4, a central processing unit 36 connected a delivery control processor unit 52 which receives commands from the CPU 36 (column 4, lines 19-45), thus enabling a single processor to coordinate amongst a number of different systems (column 2, line 65-column 3, line 3).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang, to utilize a CPU as taught by

Cohen, thus enabling a single processor to coordinate amongst a number of different systems.

The combination of Yurt, Hang and Cohen fails to disclose assigning priority levels to programming including a high priority level and successively lower levels and dividing the bandwidth so that each program category receives a segment of the bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt, Hang and Cohen to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first.

Regarding claim 117, Williams is relied upon to teach the use of an entitlement level (priority level), which indicates content available for one service versus content available for another service (column 11, lines 39-49, column 12, lines 24-35).

Regarding claim 118, Yurt teaches a cable headend 200 in Figure 1c, which receives programs from an operations center 100.

Williams is relied upon to teach the use of a header which includes an entitlement and priority level allowing a receiver to recognize which messages and intended for it (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37).

Regarding claim 119, Yurt discloses in figure 1g a transponder, which transmits and receives programming (column 4, lines 59-65).

Williams is relied upon to teach priority levels.

Regarding claims 120-121, Yurt teaches a cable headend 200 in Figure 1c, which receives programs from an operations center 100.

Williams is relied upon to teach the use of a header which includes an entitlement and priority level allowing a receiver to recognize which messages and intended for it (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37).

Regarding claims 153 and 156 Hang is relied upon to teach changing bandwidth allocation on demand (column 7, line 63-column 8, line 61).

Regarding claims 154 and 157, Hang and Cohen teach dynamically changing bandwidth allocation.

The combination of Yurt, Hang, Williams and Cohen fails to disclose changing the bandwidth allocation based on consumer demand.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on programs watched and other marketing and statistical information for the advantage of providing popular programs to subscribers (consumer demand). For example, the Nielsen rating system is the most widely known television marketing survey technique that performs periodic review of television viewership. Broadcasters utilize Nielsen type ratings systems to determine which programs to broadcast to subscribers and to determine advertising rates.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt, Hang Williams and Cohen to include selecting programs based on programs watched information and marketing information in order to provide the most popular programs to users and charge the accompanying high advertisement rate.

Regarding claims 155 and 158, Cohen teaches AV equipment connected to a CPU.

Hang is relied upon to teach dynamically changing the bandwidth allocation in real time (column 7, lines 13-62). In particular, Hang discloses that a coding factor

based on a prior number of frames and their estimated channel sharing factor may be updated based on the conditions of the current scene.

9. Claims 135-137 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,253,275 to Yurt in view of U.S. Patent 5,115,309 to Hang and U.S. Patent 4,868,866 to Williams.

Regarding claim 135, Yurt discloses a method of allocating bandwidth to a plurality of programs, wherein each of said programs corresponds to one of a plurality of categories, the method comprising:

Selecting programs received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and allocating bandwidth (column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category).

Yurt fails to disclose dynamically changing the bandwidth allocation based on demand and each program category receiving a segment of bandwidth.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated (figure 1, column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3) thus providing the advantage of

dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers. As each program corresponds to a category, and Hang teaches dynamically allocating bandwidth, Hang inherently changes the bandwidth allocation over time for at least one of the categories of programming.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt to select or allocate bandwidth dynamically to programs based on each programs bandwidth requirement as taught by Hang, thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth.

The combination of Yurt and Hang fails to disclose changing the bandwidth allocation on demand and dividing the bandwidth so that each program category receives a segment of bandwidth.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on programs watched and other marketing and statistical information for the advantage of providing popular programs to subscribers (consumer demand). For example, the Nielsen rating system is the most widely known television marketing survey technique that performs periodic review of television viewership. Broadcasters utilize Nielsen type ratings systems to determine which programs to broadcast to subscribers and to determine advertising rates.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to include selecting programs

based on programs watched information and marketing information in order to provide the most popular programs to users and charge the accompanying high advertisement rate.

The combination of Yurt and Hang fails to disclose dividing bandwidth so that each program category receives a segment of bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37, As Williams discloses that each message has a corresponding category with an entitlement level(column 11, lines 39-49), that subscriber with the proper entitlement may receive all broadcast messages (column 12, lines 24-33), and regardless of the incoming data traffic volume, the dequeuing function will be able to clear messages until they reach normal levels (column 13, lines 1-37), every message, with its corresponding category is broadcasted (allocated bandwidth), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claim 136, Yurt discloses a method of allocating bandwidth to a plurality of programs, wherein each of said programs corresponds to one of a plurality of categories, the method comprising:

Selecting programs received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and allocating bandwidth (column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category).

Yurt fails to disclose dynamically changing the bandwidth allocation based on demand and dividing the bandwidth so that each of the program categories receives a segment of the bandwidth.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated (figure 1, column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3) thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers. As each program corresponds to a category, and Hang teaches dynamically allocating bandwidth, Hang inherently changes the bandwidth allocation over time for at least one of the categories of programming.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt to select or allocate bandwidth dynamically to programs based on each programs bandwidth requirement as taught by Hang, thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth.

The combination of Yurt and Hang fails to disclose changing the bandwidth allocation based on consumer demand and dividing the bandwidth so that each of the program categories receives a segment of the bandwidth.

The examiner takes Official Notice that it is notoriously well known in the art to select programs for transmission to subscribers based on programs watched and other marketing and statistical information for the advantage of providing popular programs to subscribers (consumer demand). For example, the Nielsen rating system is the most widely known television marketing survey technique that performs periodic review of television viewership. Broadcasters utilize Nielsen type ratings systems to determine which programs to broadcast to subscribers and to determine advertising rates.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to include selecting programs based on programs watched information and marketing information in order to provide the most popular programs to users and charge the accompanying high advertisement rate.

The combination of Yurt and Hang fails to disclose dividing bandwidth so that each program category receives a segment of bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37, As Williams discloses that each message has a corresponding category with an entitlement level(column 11, lines 39-49), that subscriber with the proper entitlement may receive all broadcast messages (column 12, lines 24-33), and regardless of the incoming data traffic volume, the dequeuing function will be able to clear messages until they reach normal levels (column 13, lines 1-37), every message, with its corresponding category is broadcasted (allocated bandwidth), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Regarding claim 137, Yurt discloses a method of allocating bandwidth to a plurality of programs, wherein each of said programs corresponds to one of a plurality of categories, the method comprising:

Selecting programs received from television programming sources (column 18, lines 58-64, column 6, lines 1-37); and allocating bandwidth (column 17, line 59-column 18, line 3, each program corresponds to a category, for example the movie "Colombo" corresponds to the mystery category and the movie "The French connection" corresponds to the drama category).

Yurt fails to disclose dynamically changing the bandwidth allocation in real time and dividing the bandwidth so that each of the program categories receives a segment of the bandwidth.

Hang discloses selecting and/or allocating bandwidth to programs based on each programs bandwidth requirement and continuing the allocation step until all of the programs are allocated or all of the bandwidth is allocated (figure 1, column 3, line 10-column 4, line 65, column 9, line 62-column 10, line 3) in real-time (column 7, lines 13-62, a coding factor based on a prior number of frames and their estimated channel sharing factor may be updated based on the conditions of the current scene) thus providing the advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth requirement and providing efficient program transmission to the subscribers. As each program corresponds to a category, and Hang teaches dynamically allocating bandwidth, Hang inherently changes the bandwidth allocation over time for at least one of the categories of programming.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Yurt to select or allocate bandwidth dynamically to programs based on each programs bandwidth requirement as taught by Hang, thus providing the

advantage of dynamically allocating bandwidth to programs based on the programs' bandwidth.

The combination of Yurt and Hang fails to disclose dividing bandwidth so that each program category receives a segment of bandwidth.

Williams discloses a real-time broadcast data distribution method which assigns priorities to different categories of data, the available bandwidth is monitored and a priority queue is utilized to determine which data is to be broadcasted first (column 4, lines 1-14, column 11, lines 39-49, column 12, line 24-column 13, line 37, As Williams discloses that each message has a corresponding category with an entitlement level(column 11, lines 39-49), that subscriber with the proper entitlement may receive all broadcast messages (column 12, lines 24-33), and regardless of the incoming data traffic volume, the dequeuing function will be able to clear messages until they reach normal levels (column 13, lines 1-37), every message, with its corresponding category is broadcasted (allocated bandwidth), thus delivering programming messages which are of greatest interest to a group of users first.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Yurt and Hang to utilize the priority assignment and queuing features as taught by Williams, thus delivering programming messages which are of greatest interest to a group of users first and allowing the appropriate recipient to recognize and intended message.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 571-272-7298. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HBL

HAI TRAN
PRIMARY EXAMINER